

Appl. No. 10/080,435
Amndt. dated 21 March 2005
Reply to Office Action of 20 December 2004

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method for detecting the presence of a ligand in a cell or tissue sample, said method comprising,
contacting said sample with a binding agent, attached to a detectable nucleic acid molecule, which agent binds said ligand;
staining said sample to identify cells of interest;
capturing or isolating said cells of interest; and
detecting said nucleic acid molecule in said captured or isolated cells of interest,
wherein the presence of said nucleic acid molecule indicates the presence of said ligand.

2. (Currently amended) ~~[[The]]~~ A method of claim 1 wherein said agent is for detecting the presence of a ligand in a cell or tissue sample, said method comprising,
contacting said sample with a binding agent, attached to a detectable nucleic acid molecule, which agent is an antibody and binds said ligand;
staining said sample to identify cells of interest;
capturing or isolating said cells of interest; and
detecting said nucleic acid molecule in said captured or isolated cells of interest
wherein the presence of said nucleic acid molecule indicates the presence of said ligand.

3. (Original) The method of claim 1 wherein said sample is a tissue section, a cytospin, or a cell smear.

4. (Currently amended) ~~[[The]]~~ A method of claim 1 wherein said for detecting the presence of a ligand in a cell or tissue sample, said method comprising,

Appl. No. 10/080,435
Amdt. dated 21 March 2005
Reply to Office Action of 20 December 2004

PATENT

contacting said sample with a binding agent, attached to a detectable nucleic acid molecule, which agent binds said ligand;
staining said sample to identify cells of interest;
capturing or isolating said cells of interest; and
detecting [[is]] said nucleic acid molecule in said captured or isolated cells of interest by PCR amplification of said nucleic acid molecule,
wherein the presence of said nucleic acid molecule indicates the presence of said ligand.

5. (Original) The method of claim 4 wherein said PCR is quantitative PCR and the quantitative presence of said ligand is detected.

6. (Original) The method of claim 1 wherein said staining is by histochemical staining.

7. (Original) The method of claim 1 wherein said capturing is laser capture microdissection (LCM) or laser microdissection (LMD).

8. (Original) The method of claim 1 wherein a plurality of agents, attached to a plurality of different nucleic acid molecules, are simultaneously used to detect a plurality of ligands.

9. (Original) The method of claim 8 wherein said agents are antibodies.

10. (Original) The method of claim 1 wherein said sample is prostate tissue.

11. (Original) The method of claim 10 wherein said ligand is prostate specific ligand.

12. (Original) The method of claim 11 wherein capturing is of only one to two

Appl. No. 10/080,435
Amdt. dated 21 March 2005
Reply to Office Action of 20 December 2004

PATENT

cells.

13. (Original) The method of claim 1 wherein said nucleic acid molecule comprises a promoter.
14. (Original) The method of claim 13 wherein said promoter is a T7 promoter.
15. (Original) The method of claim 14 wherein said detecting comprises contacting said promoter with T7 polymerase and identifying transcription initiated from said T7 promoter.
16. (Original) The method of claim 8 wherein said plurality of ligands comprise two forms of a polypeptide.
17. (Original) The method of claim 16 wherein said two forms are the phosphorylated and unphosphorylated forms of a polypeptide.
18. (Original) The method of claim 5 further comprising quantitatively determining the amount of ligand per captured or isolated cell.
19. (Original) The method of claim 1 wherein said ligand is a polypeptide, a nucleic acid, a lipid, a carbohydrate, or a portion or domain or epitope thereof.
20. (Original) The method of claim 15 wherein said identifying is by contacting transcription products with a microarray comprising nucleic acid molecules capable of binding said products by base pair complementarity.

Appl. No. 10/080,435
Amdt. dated 21 March 2005
Reply to Office Action of 20 December 2004

PATENT

21. (Previously presented)
protein.

The method of claim 1 wherein said agent is a